

EX\BTF\T\21\88\06(NE W)

PRELI. B. TECH. (FTBE) EXAMINATION, 2006

2nd Semester

CHEMISTRY OF FOODS

Time: Three hours

Full Marks: 100
(50 marks for each part)

Use a separate Answer-Script for each part.

PART-I

Answer Question No. 1 and any *two* from the rest.

1. Answer any *six*: 3×6=18
- i) What is land? How is it prepared ? Where it is used ?
 - ii) What are the antioxidants? What are their role in oil industry?
 - iii) What is Maillard reaction? Give an example of this reaction.
 - iv) What do you understand by the term “Amphoterism of protein.
 - v) Write down a few names of food colours and their particular use in processed food.
 - vi) Name the food additives which are added to the processed foods to improve their selling ability.
 - vii) What is partition coefficient?

[Turn Over]

(2)

2. Differentiate between oil, fat and waxes, Briefly describe about hydrogenation, saponification and rancidity of oil. What do you know about winterisation ? 16
3. Define with examples Acidic, Basic and neutral amino acids. How amino acids and proteins can be separated by chromatographic methods. What is the basic principle by which separation of samples becomes possible. 16
4. Write short notes on (any *two*): 8×2=16
- i) Enzymatic Browning of food stuffs and its control.
 - ii) Rancidity in oil during storage.
 - iii) Commercial utilisation of whey obtained from milk industry.

PART – II

Answer any *three* questions.

All questions carry equal marks.

5. Describe the aqueous leaching method and the method by using complexing agent for the fractionation and purification of amylose and amylopectin. What happens when amylases act upon starch?
6. What are the pectic substances? Describe the different forms of pectic substances. What factors are responsible for the quality of gel formed within pectin? What do you

(3)

mean by “setting time”, “jelly grade” and “low methoxyl pectin”.

7. Write down the structures of α -carotene β -carotene, γ -carotene, cryptoxanthin and lycopene. Discuss about their sources chemical and physical properties and physiological functions. Mention the changes that may take place to those pigments during processing and drying of fruits and vegetables.
8. Discuss briefly about agar, gum arabic, carrageenan and crude fibre. How is the crude fibre content determined? What are the utility of determining crude fibre?
9. Write short notes on:
 - a) glycosides
 - b) anthocyanins
 - c) chlorophyll.

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